

Psychopathy and Violent Recidivism

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The violent recidivism rates of 169 adult male mentally disordered offenders released from a maximum security psychiatric hospital were compared over an average 10-year follow-up period. Forty percent of the total and 77% of the psychopaths (as defined by the Psychopathy Checklist) committed a violent offense. It was possible to predict outcome with considerable accuracy using combinations of childhood history, adult history, index offense, and institutional or program variables. However, the Psychopathy Checklist alone performed at least as well as any combination of variables and also improved upon the prediction based on criminal history variables. Psychopaths continued to recidivate at a higher rate than nonpsychopaths even beyond age 40.

Persons diagnosed as psychopaths occupy large numbers of beds in correctional and mental health facilities. Wong (1984) found that 15%–30% of a sample of federal inmates met the commonly used research criterion for the diagnosis of psychopathy, depending upon the security level of the correctional institution. There is evidence that psychopaths commit disproportionately high numbers of criminal and violent offenses (Hare & Jutai, 1983; Hare & McPherson, 1984; McCord, 1982).

Although there is general agreement about the salient characteristics of the psychopath (Buss, 1966; Cleckley, 1976; Hare, 1970), a key problem in the evaluation of the literature on psychopathy relates to its definition. It is difficult to evaluate the evidence linking psychopathy and violent criminality because criminal behavior is almost invariably a defining property of the term psychopathy and the closely related term, *antisocial personality disorder* (American Psychiatric Association, 1980; Hare, 1970; Hare & McPherson, 1984; Spitzer, Endicott, &

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Robins, 1978). Although the 20-item Psychopathy Checklist contains some items that are obviously related to past criminal history, it is the best developed instrument for the assessment of psychopathy among correctional populations (Hare, 1980, 1983, 1985a, 1986; Schroeder, Schroeder, & Hare, 1983; Widiger & Frances, 1987). It correlates highly with other clinical-behavioral measures such as Cleckley's (1976) criteria for psychopathy and the DSM-III diagnosis of antisocial personality disorder (Hare, 1983, 1985a). Important empirical questions remain, however. First, among violent offenders, how do psychopaths and nonpsychopaths differ in subsequent violent outcome? Second, can knowing about a violent offender's degree of psychopathy add anything to the history of criminal offending in predicting violent recidivism?

There have been a few studies where recidivism among released psychopaths or men diagnosed as personality disordered has been determined (Black, 1982; Gibbens, Pond, & Stafford-Clark, 1959; Hart, Kropp, & Hare, 1988; Pruesse & Quinsey, 1977; Quinsey, Pruesse, & Fernley, 1975a, 1975b). In all cases, psychopaths or personality disordered offenders had poorer outcomes than those of the comparison samples, either other mentally disordered offenders, or non-personality-disordered inmates. However, Gibbens, Pond, and Stafford-Clark (1959) reported that when groups of psychopaths (the criteria for the diagnosis were unclear) and other offenders were equated for previous offense histories, their recidivism rates did not differ. Similarly, a diagnosis of personality disorder, in general, was found to be highly correlated with both age and criminal history in samples of mentally disordered offenders (Black, 1982; Quinsey, Pruesse, & Fernley, 1975a). There are no studies that have examined violent recidivism among psychopaths, most of whom have already committed a violent offense.

Because public concern about offenders, especially psychopaths, focuses on violent crime, this study specifically addressed violent recidivism. The study involves a long-term follow-up of a group of psychopathic and nonpsychopathic male graduates of a maximum security therapeutic community program. In most outcome studies, the base rate of violent recidivism is too low to permit useful statistical prediction. The subjects in the present study comprised an unusually high risk sample of men most of whom had already been violent. Finally, because it has been shown that psychopaths continue their criminal careers over a long period of time (Hare, McPherson, & Forth, 1988; Wong, 1984), we also examined the relationship between age and violent recidivism.

METHOD

Subjects

The subjects were an exhaustive sample ($N = 176$) of all patients who had spent at least 2 years in the therapeutic community program of an all male, predominantly White (well over 90%) maximum security treatment institution during that program's period of operation (January, 1968, to February, 1978). Staff in charge of the program sought young (under 25), intelligent, verbally skilled

men who had been charged with serious offenses. They made a conscious attempt to ensure that some of the patients were, and that some were not, personality disordered. Program directors sometimes testified in support of a verdict of insanity as part of the effort to recruit psychopaths (for whom the program was especially intended). Such attempts to recruit treatment candidates did not require falsifying or slanting clinical records or making false diagnoses; clinicians merely testified that the patient had a personality disorder so severe that he was incapable of appreciating the nature and quality of his offense. Stated willingness to participate in a treatment program was not a criterion for selection, and patients selected for the program were no more likely to volunteer for treatment than those who were not selected. One hundred subjects (57%) had been found not guilty by reason of insanity. Other patients were men who had come to the institution for an assessment prior to trial but who had, after trial, been convicted and sent to prison. While in prison, they had been certified according to civil commitment procedures and were sent (often against their will) from prison to the maximum security program for treatment. Although certainly not a random sample of offenders arrested or convicted in the jurisdiction over the study period, the subjects were clearly some of the most serious and dangerous offenders apprehended during that time (85% had a violent previous offense, a violent index offense, or both). The condition that patients had to spend at least 2 years in the program to be subjects in the study was to allow ample opportunity for variables having to do with performance in the program to contribute to the prediction of outcome. This meant that a considerable number of patients admitted to the program (about 30%) were not subjects in the present study. The attrition occurred primarily because patients were seen to have already derived maximum benefit from the program or, much less often, because after a short stay in the program they were determined to be too dull to benefit. An additional few patients left before 2 years because an independent review board judged that they did not meet civil commitment criteria. Because successful "dropouts" were probably not psychopaths, this attrition actually makes the comparison between psychopaths and nonpsychopaths a conservative one.

The Program

Although the present study was not an evaluation of the therapeutic community program, it should be noted that it was viewed as an innovative and promising treatment for psychopathy and has been well described elsewhere (Barker & Buck, 1977; Barker & Mason, 1968; Barker, Mason, & Wilson, 1969; Barker & McLaughlin, 1977; Maier, 1976; Quinsey, 1981). The program involved intensive group therapy for up to 80 hours per week and employed a variety of innovative defense disrupting techniques. Patients regarded as doing well in the program and who showed organizational talent led therapy groups and served on security and administrative committees. Patients participated in decisions about release and transfer.

Many individuals found not guilty by reason of insanity or convicted for serious offenses in the jurisdiction during the study period were committed for

38.

treatment in the program even when they did not wish to be. Once in the program, patients who refused to engage in detailed discussion of their offenses, backgrounds, and feelings were sent to a disciplinary group, where they spent time discussing their motivation, attitudes, and participation until they complied with program requirements. The philosophy underlying the program required that patients not be able to escape the program simply because of unwillingness to participate or other institutional misbehaviors. Such patients were managed by the program components and such attrition was not permitted.¹

Procedure

All study variables (including Psychopathy Checklist and DSM-III diagnosis) except those pertaining to recidivism were coded retrospectively and exclusively from descriptive material contained in institutional files by a team of research assistants. Approximately 50 separate variables were coded. These are shown in Table 1. Three raters performed the coding of all variables and participated in the assessment of reliability described below. The coding of diagnosis employed DSM-III criteria applied to file data that had been available at the time of admission. It was not based on the diagnosis applied by physicians at actual admission. Thus, approximately two thirds of the subjects received a diagnosis of psychopathy or personality disorder from hospital physicians, but retrospective coding, based on DSM-III criteria applied to historical information, often yielded different diagnoses, and all analyses presented here are based on the retrospective coding.

Elementary school maladjustment was rated on a 4-point scale from 0 (*none*) to 3 (*serious discipline and/or attendance problems*). Socioeconomic status was highest rank order of parents' occupation while subject lived at home according to the Blisshen Scale (Blisshen & McRoberts, 1976). Childhood behavior problems was sum of items endorsed for the 12 problem behaviors noted before age 15 for a DSM-III diagnosis of antisocial personality disorder. Teen alcohol abuse was rated on a 4-point scale from 0 (*never drank*) to 3 (*serious drinking problem*). Separation from parents was due to divorce, abandonment, or institutionalization before age 16. Adult aggression score was rated on a 7-point scale from 1 (*no aggression*) to 7 (*occasional or frequent extreme aggression*). Level of Supervision Inventory was a modification (approximately 20% of the items altered slightly) of the 55-item scale (Andrews, 1982). Convictions history was a summary of criminal convictions history using the Akman and Normandeau scale (1967) for all offenses. Victim injury was rated on a 7-point scale from 1 (*no injury*) to 7 (*death with mutilation*). Psychopathy Checklist was the 20-item version. When individual items could not be coded (<5%), scores were prorated. Antisocial P.D. (DSM-III) was scored using DSM-III criteria and only file information available at admission. Attitude supportive of crime was items from the Level of Supervision

¹ Although the program would not meet current ethical standards, it was not regarded as unethical at the time even when reviewed by a House of Commons subcommittee (Canada, 1977). It should be noted that the present authors had no connection with the program and, more importantly, that the subjects of the present study cannot be considered to be a restricted sample of offenders motivated for treatment.

39.

Inventory (Andrews, 1982) indicating procriminal, antisocial values. Confinements in last year was the total number of times subject was placed in seclusion for violent or disruptive behavior during his last 12 months in the program. Negative entries in last year was the total number of times patient's clinical record contains notes referring to negative, uncooperative, symptomatic, or aggressive behavior. Months until recommendation was the length of time until program staff recommended patient for discharge.

A separate team of three raters gathered all the outcome information and sent it for coding to the first team. The first team had had extensive experience and training (mean greater than 3 years) as data coders for similar research projects. The institutional files were exceptionally complete and included information from a variety of sources (psychosocial histories, information from other institutions, police reports, psychological test reports, questionnaires from patients' families, etc.). Outcome data were obtained by the second team of research assistants from the files of the Coroner's Office, the Lieutenant Governor's Review Board (which maintains information about every insanity acquittee in the province of Ontario), the Royal Canadian Mounted Police (a national data base of criminal arrests and convictions including INTERPOL reports), the National Parole Service of Canada, and provincial correctional and parole systems. In order to prevent inadvertent contamination of the historical variables by raters' knowledge of outcome, childhood history, adult adjustment, offense, and assessment variables were coded by the first team using only file information that was available at the time the subject entered the program and only then were recidivism data obtained and coded.

In coding recidivism, subjects were classified as violent failures if they incurred any new charge for a criminal offense against persons or were returned to a maximum security institution for violent behavior against persons that, in the judgment of the first team of raters, would otherwise have resulted in a criminal charge. We employed a dichotomous outcome variable (violent recidivism or not) because simple dichotomies of outcome have been found to perform just as well as more sophisticated methods among correctional populations (Wormith & Goldstone, 1984). Time until violent failure was calculated for subjects who did fail by determining the time between the date the subject first had an opportunity to fail (having been released to the street or reaching an open psychiatric hospital), and the date he actually failed (with time spent incarcerated for nonviolent offenses subtracted). After leaving the institution, 3 subjects committed violent acts while still in a security hospital or jail and thereby "failed," even though they were technically not yet at risk to do so, and those violent reoffenses are included in the results reported below.

RESULTS

Interrater Reliability

From a larger set of mentally disordered offenders that included all the present subjects plus others that did not participate in the therapeutic community,

20 were randomly chosen (10 were from the present study) for a reliability check. One rater (the one who coded the largest number of subjects) rated all 20 of the subjects selected for the reliability check, and each of the other 2 raters rated 10 (5 from the present study). For continuous variables, mean Pearson correlation coefficients were computed and agreement for categorical variables (including recidivism) was assessed by kappa (a statistic not subject to bias due to low base rates; Brennan & Prediger, 1981). For both, the reliability criteria were set at .70, and variables not reaching these criteria were dropped from the study. For all variables retained, the mean correlation coefficient was .90 and the mean kappa statistic was .83. Because of the importance of the 20-item Psychopathy Checklist (Hare, 1985b) in the remainder of this article, we note that its reliability was .96 with an overall mean of 19.1 ($SD = 9.7$).

Violent Failure

Of the 176 subjects, 169 had an opportunity to fail and, of these, 67 (40%) met the criteria for a violent failure at the time of the last follow-up (April, 1988). The mean length of time at risk until violent failure for those who did fail was 55.4 ($SD = 46.4$) months. The overall mean duration of the follow-up period was 124.5 ($SD = 51.1$) months.

Relationships between study variables and violent outcome are shown in Table 1. In general, the results indicated that violent recidivism was related to childhood aggression and antisocial behavior, adult criminality, and misbehavior while in the program.

Multivariate Prediction

Multiple regression analyses were employed to estimate the amounts of variance in the rates of violent failure that were attributable to linear combinations of the study variables. Variables from each of four sets (childhood, adult, offense, and program) were entered into separate stepwise regression analyses with violent failure (or not) as the dependent variable. From each set, the four best predictor variables (based upon order of entry where the alpha levels were set at .25) were selected. The results of these multivariate analyses are summarized in Table 2. The final regression analysis using these 16 variables yielded $R = .58$ (adjusted $R^2 = .27$), regression $F(16,159) = 4.98$, $p < .0001$, and these coefficients were used in a multiple discriminant analysis to predict outcome. When the selection ratio was set equal to the base rate of .40, 47 of the 67 violent failures and 82 of the 102 successes were correctly classified, giving a score of 76% correct and an RIOC (relative improvement over chance, Loeber & Stouthamer-Loeber, 1987) of 50.5%, $p < .0001$.

Psychopathy and Violent Recidivism

Although a cut-off score of 30 on the 20-item Psychopathy checklist is commonly used as the criterion for psychopathy (Hare et al., 1990), we employed

Table 1. Study Variables and their Relationship with Violent Outcome

	Fail	Not fail	r ²
Childhood history			
Highest grade completed	8.29 (2.2)	9.55 (2.2)	.076***
Elementary school maladjustment	1.88 (1.14)	2.75 (1.14)	.114***
Socioeconomic status	347 (131)	287 (188)	.026*
Childhood behavior problems	4.47 (2.66)	2.22 (2.59)	.133***
Teen alcohol abuse	1.13 (1.15)	.99 (1.03)	.003
Ever suspended/expelled (%)	33	12	.061**
Ever failed a grade (%)	54	42	.016
Arrested under age 16 (%)	51	27	.062**
Separation from parents (%)	63	30	.090***
Parental psychiatric history (%)	15	10	.006
Parental criminal history (%)	6	7	.002
Parental alcohol history (%)	39	30	.012
Adult adjustment			
Admissions to corrections	2.03 (2.22)	.95 (1.66)	.075***
Psychiatric hospital admissions	1.34 (1.63)	1.04 (1.66)	.008
Previous criminal convictions	5.23 (6.23)	2.97 (4.40)	.042**
Adult aggression score	3.70 (1.92)	3.12 (1.98)	.025
Level of Supervision Inventory	19.9 (8.22)	15.6 (8.51)	.065**
Alcohol abuse	1.50 (1.26)	1.47 (1.15)	0
Convictions history	11.84 (20.8)	6.03 (16.1)	.034*
Longest job (months)	14.2 (26.8)	52.3 (171)	.019
Previous violent offense (%)	34	19	.032***
Escape history (%)	33	12	.060***
Lived alone (%)	52	65	.033*
Never married (%)	81	69	.013
Offense and assessment			
Number of separate counts	1.57 (1.17)	1.24 (.76)	.020*
Victim injury	2.79 (2.39)	4.67 (1.98)	.141***
Age at index offense	22.3 (5.34)	24.15 (7.37)	.013
Psychopathy Checklist	24.3 (9.56)	15.9 (8.28)	.173***
IQ	101 (15.8)	103 (15.3)	.006
Violent index offense (%)	66	86	.056***
Victim known (%)	12	32	.053**
Alcohol involved in offense (%)	39	30	.012
Female victim (%)	63	47	.027*
Sexual motive (%)	3	1	.012
Any DSMIII personality disorder (%)	66	32	.099***
Antisocial P.D. (DSMIII) (%)	37	15	.064***
Elevated MMPI scale 4 (%)	34	25	.024
Attitude supportive of crime (%)	56	29	.062***
Unconventional attitude (%)	55	26	.075***
Volunteered for treatment (%)	27	21	.004
Institution and program			
Assaults in last year	.15 (.54)	.05 (.26)	.016
Confinements in last year	.85 (1.75)	.25 (.66)	.051**
Negative entries in last year	6.28 (8.90)	3.78 (3.54)	.037*
Times in disciplinary program	2.09 (2.7)	1.18 (1.7)	.030*
Months until recommendation	42.7 (50.9)	30.33 (39.7)	.011
Total time in program (months)	67.2 (46.2)	63.6 (32.8)	.002
Months as program leader	4.21 (6.34)	5.18 (11.8)	.003
Nonfailure misbehaviors (%)	45	25	.035*
Age first at risk	29.5 (7.31)	31.0 (8.55)	.005
Released to hospital (%)	75	85	.015

Note. For continuous variables, numbers recorded under fail and not fail are means (SD in parentheses). For dichotomous variables (indicated by the % symbol after the variable name), the numbers recorded under Fail and Not fail are percents. Significant tests were two-tailed student *t*'s (*df* > 100) for continuous variables, and χ^2 (*df* = 1) for dichotomous variables (**p* < .05, ***p* < .01, ****p* < .001). For all variables, Bonferroni correction α = .001. To indicate relative effect size, *r*² with violent recidivism is reported for each variable.

Table 2. Variables Used in the Final Multiple Discriminant Solution

Variable	r	R
Childhood		.426
Childhood behavior problems	.365	
Separation from parents	.300	
Socioeconomic status	.162	
Parental criminal history	.041	
Adult		.372
Admissions to corrections	.273	
Escape history	.244	
Previous violent offense	.179	
Adult aggression score	.211	
Offense		.493
Victim injury	-.376	
DSMIII Personality disorder	.137	
Number of separate counts	.140	
Alcohol involved in offense	.108	
Institution		.320
Confinements in last year	.226	
Nonfailure misbehaviors	.188	
Times in disciplinary program	.174	
Released to psychiatric hospital	-.124	
Total		.578

a more liberal score of 25 as the criterion because Wong (1984) reported that basing Checklist scores on file information alone may yield underestimates for high-scoring subjects. Such a criterion still meant that only 31% of the subjects were classified as psychopaths. The use of a different criterion and the role of other diagnostic distinctions were examined in subsidiary analyses reported below.

The psychopaths exhibited a high rate of violent failure. Forty of the 52 psychopaths (77%) failed violently compared to only 24 of the 114 (21%) nonpsychopaths. Thus, employing the Psychopathy Checklist alone to predict violent failure yielded an accuracy score of 78% and a RIOC of 62.4% ($p < .0001$), better than that achieved by the preceding multivariate analyses. In order to determine whether the Psychopathy Checklist constituted anything more than a history of criminality in predicting violent outcome, a multiple regression analysis was performed in which the four best (based on entry order in stepwise regression) criminal history variables (previous violent offense, admissions to corrections, previous criminal convictions, and convictions history) first were forced into an equation to predict violent failure and then the Psychopathy Checklist score was permitted to enter. After the first step ($R = .312$, regression $F(4,161) = 4.35$, $p < .005$), the addition of the Psychopathy Checklist score raised R to .447. The F statistic associated with the addition was 20.4, $p < .0001$, and the final regression, $F(5,160)$ was 7.98, $p < .0001$.

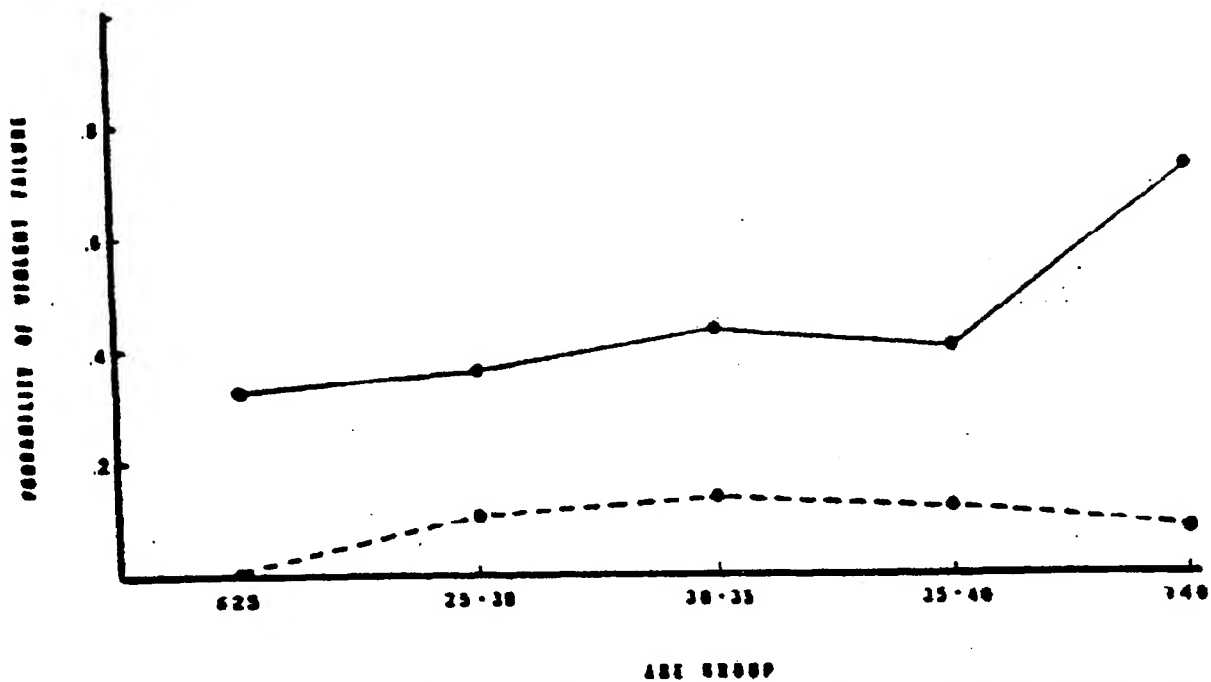


Fig. 1. Probability of violent failure as a function of age group for psychopaths (solid line) and nonpsychopaths (dashed line). The numbers of observations represented by each data point (from left to right) are 16, 27, 24, 21, and 13 for the psychopaths, and 32, 54, 79, 56, and 68 for the nonpsychopaths.

Figure 1 shows the probability of violent failure as a function of age group for psychopaths and nonpsychopaths separately. The probability was computed by dividing the number of subjects who failed in each age group by the number who had the opportunity to fail in that age group. Figure 1 shows the incidence of violent failure, but it should be noted that subjects did not have the opportunity to contribute more than one violent reoffense each because the instance of a single violent reoffense virtually always meant that a subject never got the opportunity to commit yet another during the follow-up period. Thus, for the present population, Figure 1 also shows the prevalence of violent recidivism. Chi-square statistics (each with one *df*) comparing the probability of failure for psychopaths and nonpsychopaths in each age group separately in ascending order of age were 10.2, 9.2, 11.1, 9.6, and 14.4, all $p < .005$.

Supplementary Analyses

In order to ensure that the present results were not compromised by our use of 25 as the Psychopathy Checklist criterion, we examined the rate of violent failure using a criterion of 30. Eighteen, or 78%, of the 23 subjects who scored over 30 failed violently, yielding the same rate of violent failure as obtained with the lower cutoff. In addition, the corresponding rate for subjects who scored less than 20 was 22% (17/79), the same as that obtained for subjects who scored under 25.

Second, we examined the effect of a DSM-III diagnosis of antisocial personality disorder (APD). All diagnoses were based on file information available at admission (and were not necessarily the same diagnoses assigned by admitting physicians), and there were many subjects whom raters judged to be clearly personality disordered, but it was sometimes not possible to definitively distinguish between APD and others (usually narcissistic, borderline, and mixed). Thus, we also considered any diagnosis of personality disorder. As shown in Table 1, such diagnoses were related to violent outcome. However, though it was tested, APD did not contribute to the multiple discriminant solution, and, if used as single predictors of outcome, neither APD nor any personality disorder would have performed as well as the Psychopathy Checklist (66% and 67%, respectively, correct classification compared with 78% for the Checklist).

Third, the effect of having some schizophrenics in the subject group was examined. The correlation between Psychopathy Checklist score and violent failure for all subjects was .42, $p < .0001$. There were 48 (27%) subjects who, based on file information available at the time of admission, met the DSM-III criteria for schizophrenia. When schizophrenic subjects were removed, the correlation between Checklist score and violent failure did not change, $r = .41$, $p < .0001$. Fourth, similar analyses comparing the performance of the Psychopathy Checklist for subjects found insane to convicted subjects also showed no differences. Finally, inspection of Table 1 shows that only about a quarter of the subjects volunteered for treatment and that volunteering for treatment was unrelated to violent recidivism.

DISCUSSION

The important results of this study concern the relationship between psychopathy and violent recidivism, and the value of Hare's Psychopathy Checklist as a clinical and research tool. Even though the subjects were offenders with histories of violent criminal behavior and childhood and adult maladjustment, those who were also psychopaths (as defined by the Psychopathy Checklist) exhibited much higher rates of violent recidivism than those who were not. The psychopath-nonpsychopath differences in violent recidivism could not be attributed solely to past criminal behavior.

Most of the previous work using the Psychopathy Checklist has examined general criminal recidivism, most of which is not violent (e.g., Hart et al., 1988), or the relation between psychopathy and violent index offenses (e.g., Hare & McPherson, 1984). Our results are unique in establishing the value of the Psychopathy Checklist in predicting violent recidivism among offenders almost all of whom had histories of violent offenses. The Checklist alone performed at least as well as the linear combination of other predictors, and, because it was a single variable (and therefore much less susceptible to capitalization on chance), the expected accuracy of the Checklist score in the prediction of outcome in a cross-validation would be much higher than that based on the multiple regression equation.

Some possible limitations of the present study should be addressed. First, it was not truly predictive. However, considerable methodological care was taken to ensure that predictor variables (including Psychopathy Checklist scores) were based only on file information available at admission and to avoid contamination of personal history variables by program and recidivism data. Second, the subject group was unusual in that many had been found insane and some met the criteria for a diagnosis of schizophrenia. However, this limitation is not as crucial as it may first appear. Program staff had tried hard to recruit criminal psychopaths for the program, sometimes by supporting an insanity verdict in court (but never by testifying that they were psychotic). By present legal practice, most of these subjects would not now be found insane. Examination of Table 1 supports the contention that, as a group, the subjects closely resembled high risk criminal offenders, not typical psychiatric patients. Subsidiary analyses showed that the overall relationship between Psychopathy Checklist score and violent outcome depended neither upon the fact that the subject group included some schizophrenics, nor the fact that many subjects had been found insane. Thus, we believe that our major conclusions are not seriously compromised by the inclusion of mentally disordered offenders in the subject group. Of course the subject population was also unusual in that they exhibited violent criminal histories and a high base rate of subsequent violent recidivism. We would argue that this is a strength of the present data in that they add to the scientific understanding of violent psychopaths and to the prediction of violent recidivism in high risk groups.

Third, it might be argued that the relationship between psychopathy and violent recidivism results from a methodological artifact in that the Psychopathy Checklist itself contains items pertaining to criminal violence and recidivism. Close examination of the 20-item checklist shows that there is only one item that specifically refers to violence (poor behavioral controls), and some violent acts are considered in rating only two others (juvenile delinquency and criminal versatility). The correlation between Checklist score and violent recidivism was unchanged when these items were removed (.42 vs. .41). Also there is only one item that could refer to past instances of recidivism (revocation of conditional release). Thus, although a generally antisocial lifestyle figures prominently in the Checklist and appears to constitute one of the two principal components to Checklist scores (Harpur, Hakstian, & Hare, 1988), ratings of violence and recidivism *per se* cannot be major contributors to Checklist scores. Factor analyses of the present data yielded the usual factor structure (Sample 7, Hare et al., 1990).

Finally, the subjects of this study were all graduates of an intensive treatment program aimed at altering psychopathic traits. It is possible to argue that the performance of the Psychopathy Checklist in predicting violent recidivism is at least partially the result of differential responsiveness to treatment. Such an argument would run that the therapeutic community (counter to the expectations of everyone involved) differentially reduced the rate of violent recidivism for the nonpsychopaths, but did not change or perhaps increased the rate for psychopaths. In another analysis, we plan to compare the recidivism rates of some of the present subjects who were matched on risk factors to offenders who were imprisoned, but however they are cast, the present results provide considerable predic-

tive and discriminative support for the usefulness of the construct of psychopathy and for the value of the Psychopathy Checklist to assess it.

Though age has been found to be associated with outcome in most other studies, it was not found to predict failure in the present study even though psychopaths were slightly younger than nonpsychopaths at the outset. However, our data do suggest that psychopaths are a group who remain at high risk to commit violent offenses for a long time. Our data are consistent with those of Hare et al. (1988) and Wong (1984), who found that psychopaths continued to offend at high rates up to age 40. As noted above, most of the previous work on the relation between psychopathy and criminal recidivism has considered general criminal recidivism, most of which is nonviolent. Thus, most previous examinations of psychopathy and failure over time have not specifically addressed violent recidivism (e.g., Hare et al., 1988). The present results suggest that the observation that psychopaths "burn out" after age 40 is not true for violent offenses (see Farrington, 1986). Interestingly, there were only two psychopaths with opportunity to fail over 60 years of age, and both committed violent offenses. All of these data point to the conclusion that if an effective treatment for psychopaths were found, it could have the possibility of being extremely cost-effective in reducing violent crimes committed by psychopaths upon release and/or in reducing the costs of the very long incarcerations and supervision that would otherwise be required to prevent their future offending.

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